REMARKS

All of the 42 claims submitted for examination in this application have been rejected on substantive grounds. One of the claims is objected to as including an informality. Applicants have amended their claims and respectively submit that all the claims currently in this application are patentable over the objection and rejections of record.

Turning first to the objection included in the outstanding Official Action, Claim 43 stands objected to because of the inclusion of the word "change" at line 2. That recitation makes the language of that claim ambiguous.

Applicants have adopted the change suggested in the outstanding Official Action. That is, they have changed the word "change" to --charge--. As such, the objection to Claim 43 is overcome.

It is emphasized that an additional grammatical error was discovered in Claim 43. The word "is" (first instance) should be --are--. Claim 43 has been further amended to accommodate this change.

The first of the two substantive grounds of rejections imposed in the outstanding Official Action is directed to Claims 1, 2, 6, 7, 10, 17, 18 and 44. These claims stand rejected, under 35 U.S.C.§102(b), as being anticipated by U.S. Patent No. 5,588,600 to Perfido et al.

The Official Action avers that Figure 1 shows a process for recovering crumb rubber including fiber removal step 5, metal removal step 6, cryogenic cooling 7, grinding 8 and separation 9.

Applicants have considered this ground of rejection and respectfully submit that Claim 1, from which Claims 2, 6, 7, 10 and 44 depend, and Claim 17, from which Claim 18 depends, are

novel over Perfido et al. Both independent Claims 1 and 17 include the requirement that ferrous metal be removed from a stream of granulated used rubber particles. In this regard Claim 43 is instructive. That claim points out that granulated used rubber particles are obtained from a initial charge of used rubber particles which are subjected to the steps of moving tramp metals from the initial charge of used rubber particles; granulating the used rubber particles from which tramped metal is removed; removing ferrous metal from the granulated product; and concurrently screening and removing fiber from the granulated rubber particles from which tramped metal has previously been removed.

In Perfido et al. the preliminary ferrous metal removal step 25 involves removal of ferrous metal from 1-inch rubber particles. Attention is directed to Column 4, lines 39-43. Therein it is recited that approximately 1-inch rubber particles are subjected to the ferrous metal removal step relied upon in the outstanding Official Action.

Step (a) of Claims 1 and 17 recite that the ferrous metal removing step involves removal of ferrous metal from granulated used rubber particles. The term "granulated" rubber particles is defined in the specification at Page 4, line 30 to Page 5, line 12. Therein it is recited that granulated particles are in the range of between about 0.1875 inch and particles passing through U.S. sieve size No. 30. That sieve size permits particles no larger than 0.0236 inch to pass therethrough. Those skilled in the art are aware of the significant difference between ferrous metal removal of particles in the range of between about 0.0236 and about 0.1875 inch and particles which have a particle size of about 1 inch. The former are granulated particles, the latter are not.

That Perfido et al. discloses ferrous metal removal of much larger particles does nothing to disturb the fundamental distinction between the process of Claims 1, 2, 6, 7, 10, 17, 18 and 44 and the Perfido et al. process. The claims subject to this ground of rejection require ferrous metal

removal of granulated particles prior to chilling with a cryogenic liquid. In the teaching of Perfido et al. no such step occurs. In Perfido et al. ferrous metal removal of granulated particles occurs subsequent to cryogenic fluid chilling. As such, Claims 1, 2, 6, 7, 10, 17, 18 and 44 are clearly novel over Perfido et al.

Although not subject to this ground of rejection, the claims rejected, under 35 U.S.C.§102(b), over Perifdo et al. are similarly not made obvious by that reference. The energy conservation involved in removing ferrous metal, and to a lesser extent fibers, from granulated particles prior to chilling is significant. That cooling, wherein ferrous metal absorbs sensible heat in reducing its temperature, does nothing to make easier the grinding step which occurs subsequent to the chilling step in the process of Claims 1, 2, 6, 7, 10, 17, 18 and 44 of the present application. Thus, the process of the present application, which includes the removal of ferrous metal and fiber from granulated particles prior the chilling step, is unobvious over the Perido et al. teaching of retaining significant amounts of ferrous metal in particles chilled prior to granulation.

The second substantive ground of rejection is directed to all the claims not subject to rejection in the first substantive ground of rejection, supra. These claims, Claims 4, 5, 8, 9, 11-16, 20-43 and 45, stand rejected, under 35 U.S.C.§103(a), as being unpatentable over Perfido et al. The Official Action states that the remaining limitations of these claims would have been obvious design choices since they solve no stated problems.

Although the Official Action invites applicants to advance patentable subject matter included in these claims, such argument need not be advanced in the present application insofar as the above remarks establish that Claims 1 and 17, from which each of the claims subject to this ground of rejection ultimately depend, are patentable. Thus, the limitations included in the claims subject to the second substantive ground of rejection already include patentable subject matter.

This is not to say that the limitations of Claims 4, 5, 8, 9, 11-16, 20-43 and 45 do not include any patentable advances. However, in view of clear line of patentability of the claims from which Claims 4, 5, 8, 9, 11-16, 20-43 and 45 depend, applicants need not specifically address the patentable distinctions of these claims over Perfido et al. Suffice it to say, the basic process of Claims 1 and 17 are themselves novel and unobvious over Perfido et al.

Reconsideration and removal of the two outstanding substantive grounds of rejection, in view of the above remarks, is deemed appropriate. Such action is respectfully urged.

The above amendment and remarks establish the patentable nature of all the claims currently in this application. Notice of Allowance and passage to issue of these claims, Claims 1, 4-18 and 20-45, is therefore respectfully solicited.

Respectfully submitted,

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